

DISCUSSION OF THE CLAIMS

The claims are not amended in the present paper.

Claims 1-2 and 4-22 are pending in the present application. Claims 21 and 22 are new claims. Support for the new claims is found in paragraph [0018] of the PG publications, i.e., U.S. 2007/0077425.

No new matter is added.

REMARKS

Independent Claim 1 is drawn to an aqueous sizing composition that includes an epoxy resin of a glycidyl ether. It is an explicit feature of Claim 1 that “the epoxy resin is prepared by the reaction of epichlorohydrin with an alcohol, . . .”. At least these features of the present claims are not disclosed or suggested by the art relied on by the Office. Applicant thus respectfully requests withdrawal of the rejection of the claims as anticipated by Pfeil (US 5,908,902).

The Office erroneously cites to column 4, lines 35-36 of Pfeil to support the assertion that the cited art discloses an epoxy resin that is prepared by the reaction of epichlorohydrin with an alcohol. The Pfeil disclosure is reproduced below for convenience:

(A-4) from 5 to 25%, preferably from 10 to 20% by mass, of an emulsifying product of the condensation of

(A-4-a) a preferably aliphatic polyol having a weight-average molar mass M_w of from 200 to 20,000 g/mol and

(A-4-b) an epoxide compound having at least two epoxide groups per molecule and an epoxide group content of from 500 to 10,000 mmol/kg

The condensation product described in the Pfeil reference is not the epoxy resin of the present claims because epichlorohydrin is not an epoxide compound having at least two epoxide groups per molecule. The technical description of epichlorohydrin submitted herewith shows that epichlorohydrin has only a single epoxide group per molecule. Applicant submits that those of ordinary skill in the art readily recognize that the reaction of an alcohol with epichlorohydrin necessarily forms a different product than the reaction of the alcohol with a compound having at least two epoxide groups.

Applicant thus submits that the Office's assertion that column 4, lines 35-36 of the Pfeil reference describes the epoxy resin and/or the polyglycidyl ether of the present claims is factually not correct.

The Office alternatively asserts that column 7, lines 7-10 of the Pfeil reference describes the formation of a polyglycidyl ether-based epoxy resin by reaction of epichlorohydrin and an alcohol. Applicant submits that the Office's assertion in this respect is likewise not supportable. For convenience, the cited disclosure is reproduced below:

It is also possible to use polyglycidyl esters of polycarboxylic acids, which can be obtained by reacting epichlorohydrin or similar epoxy compounds with an aliphatic, cycloaliphatic or aromatic polycarboxylic acid

Contrary to the Office's assertion, Pfeil does not describe the reaction of epichlorohydrin and an alcohol. Instead, Pfeil at column 7, lines 7-10 describes the reaction of epichlorohydrin with a *polycarboxylic acid*. A polycarboxylic acid is not the alcohol of the present claims. Pfeil makes it clear that the reaction product is not a polyglycidyl ether but instead a polyglycidyl *ester*. Applicant thus further submits the rejection of the claims as anticipated by Pfeil is not supportable and respectfully requests withdrawal of the rejection.

For the reasons discussed above in detail, Applicant respectfully requests allowance of all now-pending claims.

Respectfully submitted,

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